Applicant: Swan, et al. Serial No.: 10/723,505 Filed: November 26, 2003

For: BIOCOMPATIBLE POLYMERIZATION ACCELERATORS

Examiner: Naff, David M. Group Art Unit: 1657 Docket No.: SRM0006/US

#### Remarks

Claims 1-11, 14-21 and 28-33 were pending in the application.

Claim 33 has been cancelled as drawn to a non-elected invention.

New dependent claim 34, which is directed to a sulfonate group (and having the same features as dependent claim 11), has been added and depends from claim 21. New claim 34 and claim 11 are different in scope, because claim 11 features a composition including polymerizable material, whereas new claim 34 features a composition including a macromer. Therefore dependent claims 34 and 11 are not substantial duplicates thereof and are in compliance with 37 CFR 1.75. No new matter has been added.

Upon entry of the current amendment, claims 1-11, 14-21 and 28-32, and 34 will be pending and in front of the Examiner for consideration.

# 35 USC § 112

The Office rejected claims 1-10, 14-21 and 28-31 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office has asserted that it is unclear as to whether the biocompatible functional group is different from the N-vinyl group and carbonyl group since the N-vinyl group and carbonyl group are capable of reacting and being a functional group, and are inherently biocompatible.

Applicants respectfully disagree. Based on the plain language of the claim, as well as the dependent claims, it is clear that neither the N-vinyl group nor the carbonyl group is the biocompatible functional group that is recited in the claim. (For example, the claims do not state —wherein the carbonyl group is the biocompatible functional group-, nor, —wherein the N-vinyl group is the biocompatible functional group-.) There is no ambiguity in the claim, and the claim has proper antecedent basis.

It is also clear from throughout the specification and the Applicants' responses that the biocompatible functional group is distinct from both the N-vinyl group and the carbonyl group. For example, the contemplated formulas, and specific compounds on pages 10-15 of the application clearly distinguish the N-vinyl group and the carbonyl group from the biocompatible

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functional group that is recited in the claim. Applicants assert that the claims are in compliance with the guidelines for claim terminology as required in MPEP sections 2173.01 and 2173.05(a).

For at least these reasons, Applicants submit that the claims are definite under 35 U.S.C. 112, second paragraph, and respectfully request that the rejection be withdrawn.

### 35 USC § 103

The Office rejected claims 1-11, 14-21 and 28-32 under 35 U.S.C § 103(a) as assertedly being unpatentable over Chudzik *et al.* (7,094,418 B2; herein "Chudzik") or Hubbell *et al.* (5,529,914; herein "Hubbell '914") or Hubbell *et al.* (6,258,870 B1; "Hubbell '870") in view of Scharp *et al.* (7,427,415; herein "Scharp"), and if necessary in further view of Sawhney *et al.* (6,217,894; herein "Sawhney").

### Scharp

Applicants respectfully request reconsideration and withdrawal of the rejection in view of the declaration under 37 CFR § 1.131 showing invention prior to the effective date of Scharp, submitted herewith.

U.S. Patent Application No. 10/684,859 (which ultimately issued as U.S. Patent No. 7,427,415 to Scharp *et al.*, on September 23, 2008) claims it earliest priority to U.S. provisional patent application No. 60/419,015, filed October 11, 2002.

Inventor Swan declares that the invention claimed in the above-identified application was conceived and reduced to practice in the United States of America *prior to* October, 2002. This declaration under 37 C.F.R. § 1.131 by Swan is supported by attached exhibits 1-13 which include proposals, synthetic schemes, and experimental data describing the preparation of polymerization accelerators having biocompatible functional groups, and the use of these accelerators for preparing biocompatible polymeric matrices, which can be formed in the presence of tissue or cells.

Exhibits 1-13 show that each feature of the independent claims (claims 1, 21, and 32) was made prior to the effective date of Scharp '415. Consequently, Scharp '415 cannot serve as prior for the rejection of the pending claims.

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## • Chudzik or Hubbell '914 or Hubbell '870 and Sawhney

The current claims are non obvious over the cited references of Chudzik or Hubbell '914 or Hubbell '870 in view of Sawhney.

As noted by the Office, Chudzik discloses a composition containing a cross-linkable macromer and an accelerator, and also discusses N-vinyl caprolactam as an accelerator at column 11, line 14, in Chudzik. Hubbell '914 or Hubbell '870 refers to N-vinyl pyrolidinone in claims 1, 67, and 68 (Hubbell '914) and 1, 30, and 31 (Hubbell '870) as an accelerator for its polymerization method. Like Chudzik and Hubbell '914 or Hubbell '870, Sawhney refers to N-vinyl caprolactam and to N-vinyl pyrolidinone (col. 11, lines 38-43) as possible accelerators.

However, there is no teaching or suggestion in any of Chudzik, Hubbell '914 or Hubbell '870, or Sawhney of modifying N-vinyl caprolactam or N-vinyl pyrolidinone to provide a polymerization accelerator with a sulfonate biocompatible functional group, or other biocompatible functional group according to the application, in the polymerizable composition as currently claimed. As such, the current claims are non-obvious over these references.

Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 103.

#### Conclusion

In view of the above remarks, it is respectfully submitted that the foregoing is fully responsive to the outstanding Office action. Favorable consideration and notice of allowance of the pending claims is earnestly solicited. In the event that a phone conference between the Examiner and Applicants' representative would help resolve any issues in the application, the Examiner is invited to contact undersigned at (651) 275-9835.

By:

Respectfully Submitted,

Dated: 19 June 09

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